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AF/2157 ZLW

Attorney Docket No. 5577-319 PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Peter J. Brittenham et al;
Application Serial No.: 09/864,607 Group No.: 2157
Filed: May 23, 2001 Examiner: Emmanuel Coffy
For: **DYNAMIC UNDEPLOYMENT OF SERVICES IN A COMPUTING NETWORK**

Date: October 17, 2005

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TRANSMITTAL OF APPEAL BRIEF
(PATENT APPLICATION--37 C.F.R. § 41.37)

1. Transmitted herewith is the APPEAL BRIEF for the above-identified application, pursuant to the Notice of Appeal filed on August 15, 2005.

2. This application is filed on behalf of
☐ a small entity.

3. Pursuant to 37 C.F.R. § 41.20(b)(2), the fee for filing the Appeal Brief is:
☐ small entity $250.00
☒ other than small entity $500.00

Appeal Brief fee due $500.00

☒ Fee may be charged to Deposit Account 09-0461.

Respectfully submitted,

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Inventor: Peter J. Brittenham *et al;* Group Art Unit: 2157
Serial No.: 09/864,607 Examiner: Emmanuel Coffy
Filed: May 23, 2001 Confirmation No.: 3651
For: DYNAMIC UNDEPLOYMENT OF SERVICES IN A COMPUTING NETWORK

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APPELLANTS' BRIEF ON APPEAL UNDER 37 C.F.R. §41.37

Sir:

This Appeal Brief is filed pursuant to the "Notice of Appeal to the Board of Patent Appeals and Interferences" filed August 15, 2005.

It is not believed that an extension of time and/or additional fee(s) are required, beyond those that may otherwise be provided for in documents accompanying this paper. In the event, however, that an extension of time is necessary to allow consideration of this paper, such an extension is hereby petitioned under 37 C.F.R. Sec. 1.136(a). Any additional fees believed to be due may be charged to Deposit Account No. 09-0461.

Real Party In Interest

The real party in interest is assignee IBM Corporation, having a place of business at Armonk, New York.

Related Appeals and Interferences

The Appellants are aware of no appeals or interferences that would be affected by the present appeal.

Status of Claims

In the Final Office Action of March 28, 2005, all pending claims (*i.e.*, Claims 25-51) from the Amendment of November 7, 2005, were rejected. The Appellants appeal the final rejection of the subject matter of Claims 27, 28, 30, 49, and 51 from the Amendment of November 7, 2004.

In the second Amendment After Final of August 15, 2005: Claim 25 was amended to include all recitations of Claim 27 (from the Amendment of November 7, 2004); Claim 27 was canceled; Claim 28 was rewritten in independent form; Claim 30 was rewritten in independent form; Claim 48 was amended to include all recitations of Claim 49; Claim 49 was canceled; Claim 50 was amended to include all recitations of Claim 51; and Claim 51 was canceled. The subject matter of Claims 25-26, 28-48, and 50 from the second Amendment After Final of August 15, 2005, thus stands rejected, and Claims 1-24, 27, 49, and 51 have been canceled in the second Amendment After Final of August 15, 2005.

The Appellants will thus argue the patentability of independent Claims 25, 28, 30, 48, and 50 from the second Amendment After Final of August 15, 2005. Dependent Claims 26, 29, and 31-47 are patentable by virtue of the patentability of Claim 25 from which they depend.

The subject matter of independent Claim 25 (including all recitations of Claims 25 and 27 from the Amendment of November 7, 2004) thus stands rejected as being unpatentable over U.S. Patent No. 5,657,451 to Khello ("Khello") in view of U.S. Patent No. 6,421,727 to Reifer ("Reifer"). The subject matter of independent Claim 28 (including all recitations of Claims 25 and 28 from the Amendment of November 7, 2004) thus stands rejected as being unpatentable over Khello in view of Reifer and further in view of U.S. Patent No. 6,745,241 to French ("French"). The subject matter of independent Claim 30 (including all recitations of Claims 25, 29, and 30 from the Amendment of November 7, 2004) thus stands rejected as being unpatentable over Khello in view of Reifer. The subject matter of independent Claim 48 (including all recitations of Claims 48 and 49 from the Amendment of November 7, 2004) thus stands rejected as being unpatentable over Khello in view of Reifer. The subject matter of independent Claim 50 (including all recitations of Claims 50 and 51 from the Amendment of November 7, 2004) thus stands rejected as being unpatentable over Khello in view of Reifer.

Status of Amendments

The Appellants filed an Amendment on November 7, 2004, canceling original Claims 1-24 and adding new Claims 25-51 responsive to the Office Action of September 8, 2004. The Amendment of November 7, 2004 was entered. The Appellants filed a first Amendment After Final on May 26, 2005. As set forth in the Advisory Action of July 15, 2005, the first Amendment After Final filed May 26, 2005 was not entered.

The Appellants filed a second Amendment After Final on August 15, 2005, to place the claims in better form for consideration on appeal. In the second Amendment After Final filed August 15, 2005: Independent Claim 25 was amended to include all recitations of Claim 27; Claim 27 was canceled; Claims 28 and 30 were rewritten in independent form; Claim 48 was amended to include all recitations of Claim 49; Claim 49 was canceled; Claim 50 was amended to include all recitations of Claim 51; and Claim 51 was canceled. Entry of the claim amendments of August 15, 2005, is requested because all amendments present rejected claims in better form for consideration on appeal and/or cancel claims in compliance with 37 C.F.R. Sec. 1.116(b). Moreover, no new issues have been raised by the claim amendments of August 15, 2005.

The attached Appendix A presents the pending claims 25-26, 28-48, and 50 as amended in the Appellants' second Amendment After Final filed August 15, 2005, which has not been formally entered at this time. In the event that the Second Amendment After Final filed August 15, 2005, is not entered, the claims revert to those provided with the Amendment of November 7, 2004, in which case arguments presented below with respect to Claims 25, 48, and 50 respectively apply to Claims 27, 49, and 51 from the Amendment of November 7, 2005; arguments presented below with respect to Claim 28 apply to Claim 28 from the Amendment of November 7, 2005; and arguments presented below with respect to Claim 30 apply to Claim 30 from the Amendment of November 7, 2005.

Summary of Claimed Subject Matter

The Appellants appeal the final rejection of Claim 25 (including the recitations of Claims 25 and 27 from the Amendment of November 7, 2005), Claim 48 (including the recitations of Claims 48 and 49 from the Amendment of November 7, 2005), and Claim 50 (including the recitations of Claims 50 and 51 from the Amendment of November 7, 2005) as being patentable over U.S. Patent No. 5,657,451 to Khello ("Khello") in view of U.S. Patent No. 6,421,727 to Reifer ("Reifer"). Claim 48 is a means plus function analog of Claim 25, and Claim 50 is a computer program analog of Claim 25. The Appellants further appeal the final rejection of Claim 28 (including the recitations of Claims 25 and 28 from the Amendment of November 7, 2005) as being patentable over Khello, Reifer, and French. In addition, the Appellants appeal the final rejection of Claim 30 (including the recitations of Claims 25, 29, and 30 from the Amendment of November 7, 2005) as being patentable over

Khello and Reifer. The remaining dependent claims are patentable at least as depending from a patentable independent claim.

Claim 25 (including the recitations of Claims 25 and 27 from the Amendment of November 7, 2004) is directed to a method of dynamically undeploying services in a computing network, Claim 48 (including the recitations of Claims 48 and 49 from the Amendment of November 7, 2004) is directed to an analogous system for dynamically undeploying services in a computing network, and Claim 50 (including the recitations of Claims 50 and 51 from the Amendment of November 7, 2004) is directed to an analogous computer program product for dynamically undeploying services in a computing network. Undeployment is discussed in the Application as originally filed, for example, at page 23, line 5 to page 30, line 2 with respect to Figure 10.

With respect to Independent Claim 25, a method of dynamically undeploying web services in a computing network is claimed. For services which are dynamically deployed, an undeployment process may be provided to undeploy the original web services according to embodiments of the present invention. *See*, Application, page 27, lines 17-18. As discussed with respect to Figure 10 of the Application, the undeploy process may be started by the deployment provider 280 issuing an undeploy request from the origin server 290 to the deployment node 260 at step 1 so that an undeployment trigger for a selected web service in the computing network is received at the deployment node 260. *See*, Application, page 28, lines 4-5. The deployment node 260 may obtain a list of the deployment facilitators 230 where the web service was deployed at step 7, so that one or more network locations where the selected web service is deployed in the computing network may be determined. *See*, Application, page 29, lines 6-8. A dynamic undeployment may be effected by programmatically removing the selected web service from one or more selected ones of the network locations in the computing network at steps 8 and 9 of the Application. At step 8, an undeploy request may be sent to each deployment facilitator in the list obtained at step 7, and at step 9, when a deployment facilitator receives an undeploy request, the web service 448 is shut down and the executable code for the web service is removed from the run-time environment on the edge server 240. *See*, Application, page 29, lines 9-15.

With respect to Independent Claim 28, a method of dynamically undeploying services in a computing network is claimed. For services which are dynamically deployed, an undeployment process may be provided to undeploy the original services according to embodiments of the present invention. *See*, Application, page 27, lines 17-18. As discussed

with respect to Figure 10 of the Application, the undeploy process may be started by the deployment provider 280 issuing an undeploy request from the origin server 290 to the deployment node 260 at step 1 so that an undeployment trigger for a selected service in the computing network is received at the deployment node 260. *See*, Application, page 28, lines 4-5. Moreover, the undeployment trigger may be based upon network load at the network locations. *See*, Application, page 7, lines 10-11, and page 22, lines 14-20. The deployment node 260 may obtain a list of the deployment facilitators 230 where the service was deployed at step 7, so that one or more network locations where the selected service is deployed may be determined. *See*, Application, page 29, lines 6-8. A dynamic undeployment may be effected by programmatically removing the selected service from one or more selected ones of the network locations at steps 8 and 9 of the Application. At step 8, an undeploy request may be sent to each deployment facilitator in the list obtained at step 7, and at step 9, when a deployment facilitator receives an undeploy request, the service 448 may be shut down and the executable code for the web service is removed from the run-time environment on the edge server 240. *See*, Application, page 29, lines 9-15.

With respect to Independent Claim 30, a method of dynamically undeploying services in a computing network is claimed. For services which are dynamically deployed, an undeployment process may be provided to undeploy the original services according to embodiments of the present invention. *See*, Application, page 27, lines 17-18. As discussed with respect to Figure 10 of the Application, the undeploy process may be started by the deployment provider 280 issuing an undeploy request from the origin server 290 to the deployment node 260 at step 1 so that an undeployment trigger for a selected service may be received at the deployment node 260 wherein the undeployment trigger is an undeployment request issued by an origin server 290 from which the selected service was initially deployed. *See*, Application, page 28, lines 4-5. The deployment node 260 may obtain a list of the deployment facilitators 230 where the service was deployed at step 7, so that one or more network locations where the selected service is deployed may be determined. *See*, Application, page 29, lines 6-8.

Claim 30 further recites effecting a dynamic undeployment by programmatically removing the selected service from one or more selected ones of the network locations, sending the undeployment request to all of the network locations, shutting down the selected service at the network locations, responsive to receiving the undeployment trigger, and removing executed code which implements the selected service from a run-time

environment of each network location. As discussed in the Application, a dynamic undeployment may be effected by programmatically removing the selected service from one or more selected ones of the network locations at steps 8 and 9 of the Application. At step 8, an undeploy request may be sent to each deployment facilitator in the list obtained at step 7, and at step 9, when a deployment facilitator receives an undeploy request, the service 448 may be shut down and the executable code for the web service is removed from the run-time environment on the edge server 240. *See*, Application, page 29, lines 9-15.

In addition, Claim 30 recites shutting down the selected service at the origin server, and, responsive to receiving the undeployment trigger, and removing executed code which implements the selected service from a run-time environment of each network location. In addition, the selected service may be made unlocatable in the computing network. As discussed in the Application, the deployment provider may shut down the web service 495 that is running on the origin server and then remove the executable code at step 11. *See*, Application, page 30, lines 1-2. At step 9, the web service 448 may be shut down and the executable code for the web service may be removed from the run time environment of the edge server 240. *See*, Application, page 29, lines 11-13. At step 4, the deployment node may start the undeploy process by sending an unpublish request to the public registry 220, and the service requesters 210 may not be able to find the web service description after this request is processed. *See*, Application, page 28, lines 14-16.

With respect to Independent Claim 48, a system for dynamically undeploying web services in a computing network is claimed. For services which are dynamically deployed, an undeployment process may be provided to undeploy the original web services according to embodiments of the present invention. *See*, Application, page 27, lines 17-18. As discussed with respect to Figure 10 of the Application, the undeploy process may be started by the deployment provider 280 issuing an undeploy request from the origin server 290 to the deployment node 260 at step 1 so that the deployment node 260 may provide means for receiving an undeployment trigger for a selected web service in the computing network. *See*, Application, page 28, lines 4-5. The deployment node 260 may obtain a list of the deployment facilitators 230 where the web service was deployed at step 7, so that the deployment node 260 may provide means for determining one or more network locations where the selected web service is deployed in the computing network. *See*, Application, page 29, lines 6-8. The deployment node 260 and/or the deployment facilitator 230 may provide means for effecting a dynamic undeployment by programmatically removing the selected

web service from one or more selected ones of the network locations in the computing network as discussed with respect to steps 8 and 9 of the Application. At step 8, an undeploy request may be sent to each deployment facilitator in the list obtained at step 7, and at step 9, when a deployment facilitator receives an undeploy request, the web service 448 may be shut down and the executable code for the web service may be removed from the run-time environment on the edge server 240. *See*, Application, page 29, lines 9-15.

With respect to Independent Claim 50, a computer program product for dynamically undeploying web services in a computing network is claimed, and the computer program product may be embodied in one or more computer-readable media. For services which are dynamically deployed, an undeployment process may be provided to undeploy the original web services according to embodiments of the present invention. *See*, Application, page 27, lines 17-18. As discussed with respect to Figure 10 of the Application, the undeploy process may be started by the deployment provider 280 issuing an undeploy request from the origin server 290 to the deployment node 260 at step 1 so that computer-readable program code may be configured to receive an undeployment trigger for a selected web service in the computing network at the deployment node 260. *See*, Application, page 28, lines 4-5. The deployment node 260 may obtain a list of the deployment facilitators 230 where the web service was deployed at step 7, so that computer-readable program code may be configured to determine one or more network locations where the selected web service is deployed in the computing network. *See*, Application, page 29, lines 6-8. In addition, computer-readable program code may be configured to effect a dynamic undeployment by programmatically removing the selected web service from one or more selected ones of the network locations in the computing network at steps 8 and 9 of the Application. At step 8, an undeploy request may be sent to each deployment facilitator in the list obtained at step 7, and at step 9, when a deployment facilitator receives an undeploy request, the web service 448 is shut down and the executable code for the web service is removed from the run-time environment on the edge server 240. *See*, Application, page 29, lines 9-15.

Grounds of Rejection To Be Reviewed on Appeal

The subject matter of Independent Claims 25, 30, 48 and 50 and dependent Claims 26 and 31-47 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,657,451 to Khello ("Khello") in view of U.S. Patent No. 6,421,727 to Reifer ("Reifer").

The subject matter of Claim 28 stands rejected as being unpatentable over Khello in view of Reifer and further in view of U.S. Patent No. 6,475,241 to French ("French").

In the following remarks, the Appellants will show that independent Claims 25, 48, and 50 are patentable over Khello and Reifer, and that dependent Claims 26, 29, and 31-47 are patentable at least as per the patentability of Claim 25 from which they depend.

The Appellants will also show that Claim 28 is patentable over Khello, Reifer, and French.

In addition, the Appellants will show that Claim 30 is separately patentable over Khello and Reifer.

Arguments

I. Introduction to 35 U.S.C. § 103 Analysis

The subject matter of pending Claims 25-26, 29-48, and 50 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Khello in view of Reifer; and the subject matter of pending Claim 28 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Khello in view of Reifer and further in view of French. A determination under Section 103 that an invention would have been obvious to someone of ordinary skill in the art is a conclusion of law based on fact. *Panduit Corp. v. Dennison Mfg. Co.* 810 F.2d 1593, 1 U.S.P.Q.2d 1593 (Fed. Cir. 1987), *cert. denied*, 107 S.Ct. 2187. After the involved facts are determined, the decision maker must then make the legal determination of whether the claimed invention as a whole would have been obvious to a person having ordinary skill in the art at the time the invention was unknown, and just before it was made. *Id.* at 1596. The United States Patent and Trademark Office has the initial burden under Section 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988).

To establish a *prima facie* case of obviousness, the prior art references cited in the rejection, when combined, must teach or suggest *all* the recitations of the claims, and there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the reference teachings in the manner suggested. M.P.E.P. § 2143. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. M.P.E.P. § 2143.01, citing *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990). As emphasized by the Court of Appeals for

the Federal Circuit, to support combining references, evidence of a suggestion, teaching, or motivation to combine must be clear and particular, and this requirement for clear and particular evidence is not met by broad and conclusory statements about the teachings of references. *In re Dembiczak*, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Thus, in support of a Section 103 rejection, particular evidence from the prior art must be provided showing why a skilled artisan, with no knowledge of the claimed invention, would have combined the cited references in the manner claimed in the rejection. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

Furthermore, as recently stated by the Federal Circuit with regard to the selection and combination of references:

> This factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." *W.L. Gore v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983). Thus the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion....

In re Sang Su Lee, 277 F.3d 1338, 1343 (Fed. Cir. 2002).

Appellants respectfully submit that the pending claims are patentable over the cited references because the cited combination fails to disclose or suggest all of the recitations of the pending claims, and because the reasoning behind such combination has not been established. The patentability of the pending claims is discussed in detail hereinafter.

As analyzed in detail below, the Appellants submit that Claims 25-26, 28-48, and 50 are patentable over the combination of Khello and Reifer.

II. Claims 25, 26, 29, 31-48, And 50 Are Patentable Over Khello In View Of Reifer

The subject matter of Claims 25, 26, 29, 31-48, and 50 stands rejected as being as being unpatentable over Khello in view of Reifer. The combination of Khello and Reifer, however, fails to teach or suggest the subject matter of Claims 25, 26, 29, 31-48, and 50 for at least the reasons discussed below.

A. Independent Claims 25, 48, and 50 Are Patentable Over Khello In View Of Reifer

In the second Amendment After Final of August 15, 2005, Claim 25 was amended to include all recitations of previously presented Claim 27 thereby narrowing issues for further consideration. In the Final Office Action of March 28, 2005, Claim 27 (the recitations of which correspond to those of Claim 25 in the present Amendment) was rejected under 35 U.S.C. Sec. 103(a) as being unpatentable over Khello in view of Reifer. In response, the Appellants will show that Claim 25 is patentable over the cited art for at least the reasons discussed below. Claims 48 and 50 have been similarly amended, and Claims 48 and 50 are similarly patentable over Khello and Reifer.

Claim 25 recites a method of dynamically undeploying web services in a computing network, the method including:

> receiving an undeployment trigger for a selected service;
> determining one or more network locations where the selected service is deployed; and
> effecting a dynamic undeployment by programmatically removing the selected service from one or more selected ones of the network locations;
> wherein services comprise web services;
> wherein receiving an undeployment trigger comprises receiving an undeployment trigger for a selected web service in the computing network;
> wherein determining one or more network locations comprises determining one or more network locations where the selected web service is deployed in the computing network; and
> wherein effecting a dynamic undeployment comprises effecting a dynamic undeployment by programmatically removing the selected web service from one or more selected ones of the network locations in the computing network.

In contrast to the method of undeploying a "web service" in a "computing network" recited in Claim 25, both Khello and Reifer discuss telecommunications networks/systems. More particularly, Khello discusses a generic service coordination mechanism that solves feasible service interaction problems within telecommunications networks. (*See*, for example, Khello, Abstract; col. 2, lines 45-50; col. 5, lines 23. col. 6, lines 6, 44, 61-62, and 67; col. 7, lines 10, and 26; etc.) Similarly, Reifer discusses providing service activation capability from service providers to end-customers in a global Iridium type telecommunications system. (*See*, for example, Reifer, Title; Abstract; col. 1, lines 6-8; col. 2, line 2; col. 3, line 30; etc.) Accordingly, neither Khello or Reifer or the combination thereof teaches or suggests any of the following recitations of amended Claim 25:

(1) a web service in a computing network;
(2) an undeployment trigger for a web service in a computing network;
(3) determining a location where a web service is deployed in a computing network; or

(4) programmatically removing a web service from a network location in a computing network.

The Final Office Action cites col. 8, lines 54-56 of Khello with respect to receiving an undeployment trigger for a selected web service in the computing network. The cited portion of Khello states that:

> At the time of a service provision or withdrawal procedure request, the coordination mechanism accomplishes the following tasks....

Khello, col. 8, lines 54-56. The "service" referred to in Khello, however, is a "telecommunications service" as discussed, for example, in Khello at col. 6, lines 44-60, as opposed to a web service in a computing network. Khello thus fails to teach or suggest receiving an undeployment trigger for a selected web service in a computing network.

The Final Office Action cites col. 8, lines 54-67 of Khello with respect to effecting a dynamic undeployment by programmatically removing the selected web service from one or more selected one of the network locations in the computing network. The cited portion of Khello states that:

> At the time of a service provision or withdrawal procedure request, the coordination mechanism accomplishes the following tasks:
> Inhibits a repeated provision of the same service on a specific access or to a specific subscriber;
> Inhibits provision of a service due to inconsistency between the access and/or subscriber and the service characteristics;
> Inhibits provision and/or withdrawal of a service due to the definitive interaction criteria: Restricted or Dependent;
> Inhibits provision and withdrawal of a service due to disallowed authority;

Khello, col. 8, lines 54-67. As discussed above, however, the service of Khello refers to a telecommunications service as opposed to a web service. Accordingly, Khello fails to teach or suggest programmatically removing a selected web service from a network location in a computing network.

Moreover, the Office Action concedes that "Khello does not explicitly teach determination of network locations." Accordingly, Khello fails to teach or suggest any of the recitations of Claim 25, and Reifer fails to provide the missing teachings. Moreover, the Office Action does not identify any portions of Reifer as teaching or suggesting an undeployment trigger for a web service or programmatically removing a web service from a network location in a computing network.

The Office Action cites col. 4, lines 24-29 and Figures 8 and 9 of Reifer with respect to determining network locations. The cited portion of Reifer states that:

> A Home Gateway is assigned to each subscriber to the network 100 and is related to the LAC at which the subscriber is based. The Home Gateway is responsible for granting system access. Whenever a subscriber places or receives a call, the network 100 will determine the subscriber's location with accuracy sufficient for call control. The Home Gateway will receive and evaluate this location information to determine whether it is permissible for the call to proceed. This feature is essential to help ensure compliance with calling restriction laws in nations where such laws exist.

Reifer, col. 4, lines 24-32. Reifer thus discusses determining a subscriber's location for call control. While Figure 8 shows a "Web Network (Iridium Intranet)" and Figure 9 shows an "Internet", nothing in Reifer teaches or suggests determining a subscriber's location for anything other than call control. More particularly, Reifer fails to teach or suggest determining a location where a web service is deployed in a computing network.

As set forth in Section 2143 of the Manual Of Patent Examining Procedure (MPEP), three basic criteria must be met to establish a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

As discussed above, the Khello and Reifer patents (when taken alone or when combined) fail to teach or suggest all of the claim limitations as required by the MPEP. As discussed above, the Office Action concedes that Khello does not teach determining a location where a web service is deployed in a computing network, and Reifer fails to provide the missing teaching because Reifer discusses determining a subscriber's location for call control. Moreover, Khello also fails to teach or suggest an undeployment trigger for a web service in a computing network and/or programmatically removing a web service from a network location in a computing network, and the Office Action does not point to any portions of Reifer as teaching or suggesting these recitations.

In the alternative, assuming for the sake of argument that Khello does teach all elements of Claim 25 except determination of network locations and web services as set forth in the Office Action, the Appellants respectfully submit that there is no motivation to modify Khello in light of Reifer as suggested by the Office Action. In particular, the cited portions

of Reifer discuss determining a subscriber's "location for call control" in a telecommunications network, and evaluating the location information to determine "whether it is permissible for the call to proceed." (*See*, Reifer, col. 4, lines 25-30.) In addition, Reifer states that "This feature is essential to help ensure compliance with calling restriction law in nations where such laws exist." (Reifer, col. 4, lines 30-32.) The Appellants respectfully submit that location determination "for call control" and to "ensure compliance with calling restriction law" in a telecommunications network fails to teach or suggest determining a network location where a web service is deployed in a computing network and programmatically removing the web service from the network location in the computing network.

For the reasons discussed above, the Appellants respectfully submit that Claim 25 is patentable over the cited art. In addition, Claims 48 and 50 are patentable for reasons similar to those discussed above with respect to Claim 25. The Appellants further submit that Dependent Claims 26, 29, and 31-47 are patentable at least as per the patentability of Claim 25 from which they depend. If the Examiner should maintain any rejections based on the combination of Khello and Reifer, the Appellants respectfully request that the Examiner provide clarification regarding the motivation to modify Khello in view of Reifer to teach or suggest the recitations of Claim 25.

B. Independent Claim 28 Is Patentable Over Khello In View Of Reifer And French

The subject matter of Claim 28 has been rejected as being unpatentable over Khello in view of Reifer and further in view of French. Claim 28, however, is patentable for at least the reasons discussed below.

The Appellants respectfully submit that French cannot be used in a rejection under 35 U.S.C. Sec. 103(a) because the subject matter of present application and the French patent were, at the time the invention was made, owned by International Business Machines Corporation (IBM) or subject to an obligation of assignment to IBM, and because the French patent qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102. *See*, 35 U.S.C. Sec. 103(c). The French patent has been removed as a reference to advance prosecution of the present application pursuant to 35 U.S.C. Sec. 103(c), and reliance on 35 U.S.C. Sec. 103(c) should not be construed as an admission that French discloses or suggests the claimed invention or elements thereof.

The Appellants thus request that all rejections of Claim 28 be withdrawn. Accordingly, the Appellants respectfully submit that Claim 28 is in condition for allowance.

C. Independent Claim 30 Is Patentable Over Khello In View Of Reifer

The subject matter of Claim 30 has been rejected under as being unpatentable over Khello in view of Reifer. Claim 30, however, is patentable for at least the reasons discussed below.

Claim 30 was rewritten in independent form in the second Amendment After Final of August 15, 2005. Accordingly, Claim 30 recites a method of dynamicallhy undeploying services in a computing network. In addition, Claim 30 recites:

> receiving an undeployment trigger for a selected service wherein the undeployment trigger is an undeployment request issued by an origin server from which the selected service was initially deployed;
> determining one or more network locations where the selected service is deployed; and
> effecting a dynamic undeployment by programmatically removing the selected service from one or more selected ones of the network locations;
> sending the undeployment request to all of the network locations;
> shutting down the selected service at the network locations, responsive to receiving the undeployment trigger, and removing executed code which implements the selected service from a run-time environment of each network location;
> shutting down the selected service at the origin server; and, responsive to receiving the undeployment trigger, and removing executed code which implements the selected service from a run-time environment of each network location; and
> making the selected service unlocatable in the computing network.

The Appellants respectfully submit that the cited art fails to teach or suggest at least "removing executed code" and/or "making the selected service unlocatable." With respect to removing executed code, the Office Action cites "col. 8, line 54-col. 9, line 67" without identifying the reference being cited. After reviewing col. 8, line 54 to col. 9, line 67 of both Khello and Reifer, the Appellants respectfully submit that neither reference teaches or suggests "removing executed code."

The Appellants further submit that the cited art fails to teach or suggest making a selected service unlocatable. With respect to making a selected service unlocatable, the Office action cites col. 16, lines 45-65 of Khello. The cited portions of Khello state that:

> a general deactivation procedure is performed internally within the coordinator which changes the coordination state to "BARRED".

Khello, col. 16, lines 62-65. Reading on, Khello states that:

> If such indications are present, the routine moves to step 198 where the coordinator state is reset to its original value. ... Thus, the service can be generally available, but withdrawn individually for a specific user. (Underline added.)

Khello, col. 17, lines 5-9. The Appellants respectfully submit that the service being generally available teach away from making a selected service unlocatable.

Accordingly, the Appellants respectfully submit that Claim 30 is patentable over the cited art. If the Examiner should maintain any rejections of Claim 30 based on Khello and Reifer, the Appilcants respectfully request that the Examiner particularly identify portions of one or both references that teach or suggest removing executed code and that teach or suggest making a service unlocatable.

III. Consideration Of References Cited In The Information Disclosure Statement Of December 7, 2004 Is Requested

The Appellants respectfully request that the Examiner provide indication of consideration of the references cited in the Information Disclosure Statement of December 7, 2004. Copies of the Information Disclosure Statement (including a Certificate Of Mailing dated December 7, 2004), the Form PTO-1449 (citing 17 U.S. patent documents), and the post card receipt (showing receipt at the U.S. Patent Office on December 10, 2004) are attached.

IV. Conclusion

In summary, the Appellants respectfully submit that the cited art fails to teach or suggest all recitations of independent Claims 25, 28, 30, 48, and 50 for at least the reasons discussed above. The remaining dependent claims are patentable at least as depending from patentable independent Claim 25. Accordingly, the Appellants respectfully request reversal of the rejection of the subject matter of Claims 25-26, 28-48, and 50 based on the cited references.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Appeal Brief-Patent, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on October 17, 2005.

Joyce Paoli

Appendix A: Claims

Claims 1-24 (canceled).

25. (rejected) A method of dynamically undeploying services in a computing network, the method comprising:

receiving an undeployment trigger for a selected service;

determining one or more network locations where the selected service is deployed; and

effecting a dynamic undeployment by programmatically removing the selected service from one or more selected ones of the network locations;

wherein services comprise web services;

wherein receiving an undeployment trigger comprises receiving an undeployment trigger for a selected web service in the computing network;

wherein determining one or more network locations comprises determining one or more network locations where the selected web service is deployed in the computing network; and

wherein effecting a dynamic undeployment comprises effecting a dynamic undeployment by programmatically removing the selected web service from one or more selected ones of the network locations in the computing network.

26. (rejected) The method according to claim 25, further comprising:

receiving client requests for the selected service; and

continuing to serve the received requests from the network locations other than the one or more selected ones from which the selected service was programmatically removed.

Claim 27 (canceled).

28.(rejected) A method of dynamically undeploying services in a computing network, the method comprising:

receiving an undeployment trigger for a selected service;

determining one or more network locations where the selected service is deployed; and

effecting a dynamic undeployment by programmatically removing the selected service from one or more selected ones of the network locations;

wherein the undeployment trigger is based upon network load at the network locations.

29. (rejected) The method according to claim 25, wherein the undeployment trigger is an undeployment request issued by an origin server from which the selected service was initially deployed.

30. (rejected) A method of dynamically undeploying services in a computing network, the method comprising:

receiving an undeployment trigger for a selected service wherein the undeployment trigger is an undeployment request issued by an origin server from which the selected service was initially deployed;

determining one or more network locations where the selected service is deployed; and

effecting a dynamic undeployment by programmatically removing the selected service from one or more selected ones of the network locations;

sending the undeployment request to all of the network locations;

shutting down the selected service at the network locations, responsive to receiving the undeployment trigger, and removing executed code which implements the selected service from a run-time environment of each network location;

shutting down the selected service at the origin server; and, responsive to receiving the undeployment trigger, and removing executed code which implements the selected service from a run-time environment of each network location; and

making the selected service unlocatable in the computing network.

31. (rejected) The method according to claim 25, wherein the undeployment trigger is based upon usage of the selected service at the network locations.

32. (rejected) The method according to claim 31, wherein the usage is an average number of client requests for the selected service within a predetermined time interval.

33. (rejected) The method according to claim 31, further comprising:

comparing the usage of the selected service to a predetermined threshold, and sending the undeployment trigger when the usage falls below the predetermined threshold.

34. (rejected) The method according to claim 33, wherein a value of the predetermined threshold may be modified over time.

35. (rejected) The method according to claim 33, wherein a value of the predetermined threshold applies to a plurality of deployed services.

36. (rejected) The method according to claim 33, wherein the predetermined threshold applies individually to the selected service.

37. (rejected) The method according to claim 33, wherein a value of the predetermined threshold applies to all of the network locations.

38. (rejected) The method according to claim 33, wherein a value of the predetermined threshold applies to the one or more selected ones of the network locations.

39. (rejected) The method according to claim 33, wherein a value of the predetermined threshold is initially set when the selected service is deployed.

40. (rejected) The method according to claim 33, further comprising:

obtaining the usage at periodic intervals for use when comparing the usage of the selected service to a predetermined threshold.

41. (rejected) The method according to claim 40, wherein the obtaining the usage comprises obtaining the usage from all of the network locations.

42. (rejected) The method according to claim 41, wherein obtaining the usage comprises obtaining the usage from representative ones of the network locations.

43. (rejected) The method according to claim 41, wherein the programmatically removing occurs at a particular one of the network locations, and wherein the obtaining the usage comprises obtaining the usage from the particular one.

44. (rejected) The method according to claim 25, further comprising:

monitoring a load on the computing network; and

triggering the dynamic undeployment when the monitored load meets a predetermined threshold.

45. (rejected) The method according to claim 25, wherein programmatically removing the selected service further comprises issuing an undeployment request for the selected service to the one or more selected ones.

46. (rejected) The method according to claim 45, further comprising:

receiving the undeployment request at a particular one of the network locations, the particular one being the selected one of the network locations from which the selected service is being dynamically undeployed; and

shutting down the selected service at the particular one, responsive to receiving the undeployment trigger, and removing executed code which implements the selected service from a run-time environment of the particular one.

47. (rejected) The method according to claim 46, further comprising:

making the selected service unlocatable from a routing system.

48. (rejected) A system for dynamically undeploying services in a computing network, comprising:

means for receiving an undeployment trigger for a selected service;

means for determining one or more network locations where the selected service is deployed; and

means for effecting a dynamic undeployment by programmatically removing the selected service from one or more selected ones of the network locations;

wherein services comprise web services;

wherein the means for receiving an undeployment trigger comprises means for receiving an undeployment trigger for a selected web service in the computing network;

wherein the means for determining one or more network locations comprises means for determining one or more network locations where the selected web service is deployed in the computing network; and

wherein the means for effecting a dynamic undeployment comprises means for effecting a dynamic undeployment by programmatically removing the selected web service from one or more selected ones of the network locations in the computing network.

Claim 49 (canceled).

50. (rejected) A computer program product for dynamically undeploying services in a computing network, the computer program product embodied on one or more computer-readable media and comprising:

computer-readable program code that is configured to receive an undeployment trigger for a selected service;

computer-readable program code that is configured to determine one or more network locations where the selected service is deployed; and

computer-readable program code that is configured to effect a dynamic undeployment by programmatically removing the selected service from one or more selected ones of the network locations;

wherein services comprise web services;

wherein the computer-readable program code that is configured to receive an undeployment trigger comprises computer-readable program code that is configured to receive an undeployment trigger for a selected web service in the computing network;

wherein the computer-readable program code that is configured to determine one or more network locations comprises computer-readable program code that is configured to determine one or more network locations where the selected web service is deployed in the computing network; and

wherein the computer-readable program code that is configured to effect a dynamic undeployment comprises computer-readable program code that is configured to effect a dynamic undeployment by programmatically removing the selected web service from one or more selected ones of the network locations in the computing network.

Claim 51 (canceled).

Appendix B: Evidence

No evidence pursuant to 37 CFR Sec. 1.130, Sec. 1.131, or Sec. 1.132 is relied upon by Appellants in the appeal.

Appendix C: Related Proceedings

There are no related proceedings pursuant to 37 C.F.R. Sec. 41.37.

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OCT 19 2005
PATENT & TRADEMARK OFFICE

Attorney's Docket No. RSW920010106US1 PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Peter J. Brittenham
Serial No.: 09/864,607
Filed: May 23, 2001
For: DYNAMIC UNDEPLOYMENT OF SERVICES IN A COMPUTING NETWORK

Confirmation No.: 3651
Group Art Unit: 2157
Examiner: Emmanuel Coffy
Date: December 7, 2004

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on December 7, 2004.

Joyce Paoli

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

Attached is a list of documents on Form PTO-1449, together with a copy of any listed foreign patent document and/or non-patent literature. A copy of any listed U.S. patent and/or U.S. patent application publication is not provided herewith in accordance with the amendment by the U.S. Patent and Trademark Office to 37 C.F.R. § 1.98(a)(2)(ii) effective October 21, 2004.

It is requested that these documents be considered by the Examiner and officially made of record in accordance with the provisions of 37 C.F.R. § 1.56 and Section 609 of the MPEP.

In accordance with the requirements of 37 C.F.R. § 1.97(c)(2) we hereby give the Commissioner authorization to charge IBM Deposit Account No.: 09-0461 in the amount of $180.00 for the fee as specified in 37 C.F.R. § 1.17(p). This amount is believed to be correct. However, the Commissioner is authorized to charge any deficiency or credit any overpayment to the Deposit Account if necessary.

Respectfully submitted,

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Substitute form 1449A/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	09/864,607
				Filing Date	May 23, 2001
				First Named Inventor	Peter J. Brittenham
				Group Art Unit	2157
(use as many sheets as necessary)				Examiner Name	3651
Sheet	1	of	A1	Attorney Docket Number	5577-319

U.S. PATENTS AND PATENT PUBLICATIONS

Examiner Initials*	Cite No.	U.S. Patent Document Number	U.S. Patent Document Kind Code (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
	1.	US-5,341,477		Pitkin et al;	08/1994
	2.	US-5,951,694		Choquier, et al;	09/14/1999
	3.	US-6,055,570		Nieisen	04/2000
	4.	US-6,081,840		Zhao	06/27/2000
	5.	US-6,094,680		Hokanson	07/25/2000
	6.	US-6,167,444		Boden et al;	12/2000
	7.	US-6,173,322		Wei Ming Hu	01/09/2001
	8.	US-6,233,607		Taylor et al;	05/15/2001
	9.	US-6,256,675		Rabinovich	07/03/2001
	10.	US-6,324,543		Cohen et al;	11/2001
	11.	US-6,418,452		Kraft et al;	07/2002
	12.	US-6,549,932		McNally et al;	04/2003
	13.	US-6,654,610		Chen et al;	11/2003
	14.	US-6,704,024		Robotham et al;	03/2004
	15.	US-6,779,032		Hericourt	08/2004
	16.	US-2002/0078167		Shavit et al;	06/2002
	17.	US-2002/0104071		Charisius et al;	08/2002
		US-			
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FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.	Foreign Patent Document Office	Foreign Patent Document Number	Foreign Patent Document Kind Code (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	T

OTHER NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T

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Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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MS Amendment SCIT 5577-319

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Date: 12-7-04
Doc. No. RSW920010107US1
Serial No. 09/864,607
Inventor: Battenham

Sir: Kindly acknowledge receipt of the accompanying items listed below by placing your receiving stamp hereon and return mailing:

_____ Application Transmittal and:
- ___ Specification pages ____
- ___ No. of Claims _____
- ___ Declaration & POA
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- ___ Issue Fee
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- ___ Appeal
- ___ Submittal of Priority Doc

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Respectfully submitted,
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Attorneys for Applicant

Formal Drawings/
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